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August 16, 2012

Via Federal Express Overnight

Document Processing Center (7407M) EPA East – Room 6428 ATTN: 8(e) Coordinator U.S. Environmental Protection Agency 1201 Constitution Avenue, NW Washington, DC 20004-3302

RE: TSCA 8(e) Submission

Bis(2,4-dimethylpentadienyl)ruthenium(II)

Trivial name: Ru(DMPD)2 CAS RN 85908-78-7 •

Dear Sir/Madam:

Johnson Matthey Inc. received a report from a study conducted to assess the mutagenic potential of the above compound. We reviewed the information for reportability under the Agency's TSCA 8(e) guidance and provide below a summary of the information that may meet the reportability criteria. We do not know whether such information or similar studies were previously reported to EPA, or whether the information is otherwise known to the Administrator.

To the best of our knowledge, bis(2,4-dimethylpentadienyl)ruthenium(II) is not listed on the TSCA Inventory and is not manufactured for a commercial purpose in the US, except in small quantities solely for research and development.

Study Summary:

A screening Ames test using an in vitro reverse mutation assay was conducted on bis(2,4-dimethylpentadienyl)ruthenium(II). Two *S.typhimurium* bacterial tester strains were employed in the assay, viz. TA98 and TA100. Test article exposures were in the absence of a metabolic activation system. The assay conditions were selected based on knowledge of the behaviour of structurally related ruthenium complexes.

Positive responses indicative of mutagenic potential were obtained in both test strains with bis(2,4-dimethylpentadienyl)ruthenium(II) dissolved in dimethylformamide (DMF) as a vehicle. This conclusion was based on statistically significant increases in the mean number of revertant colonies in comparison to the vehicle control. The

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effect exhibited a dose-response, and became statistically significant from a concentration of 50 $\mu g/plate$. The TA98 (frameshift mutation) response was considered to be dominant under the conditions of this test. Cytotoxicity was clearly evident at plate concentrations above 500 μg and precipitation was described at the maximal plate concentration of 5000 μg .

Should you have any questions, or require further information, please contact the undersigned.

Regards,

Barbara Curtis

Manager, Health, Safety & Environmental Affairs North America

610 971-3055

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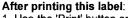
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